

Business Intelligence Refactored with DevOps

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BUSINESS INTELLIGENCE

Business Intelligence Failure Modes

- Still collecting requirements.
- No one is using the software.
- The data cannot be trusted.
- Vendor's tools are limited.
- Analyzing the wrong problems.

BUSINESS EVOLUTION

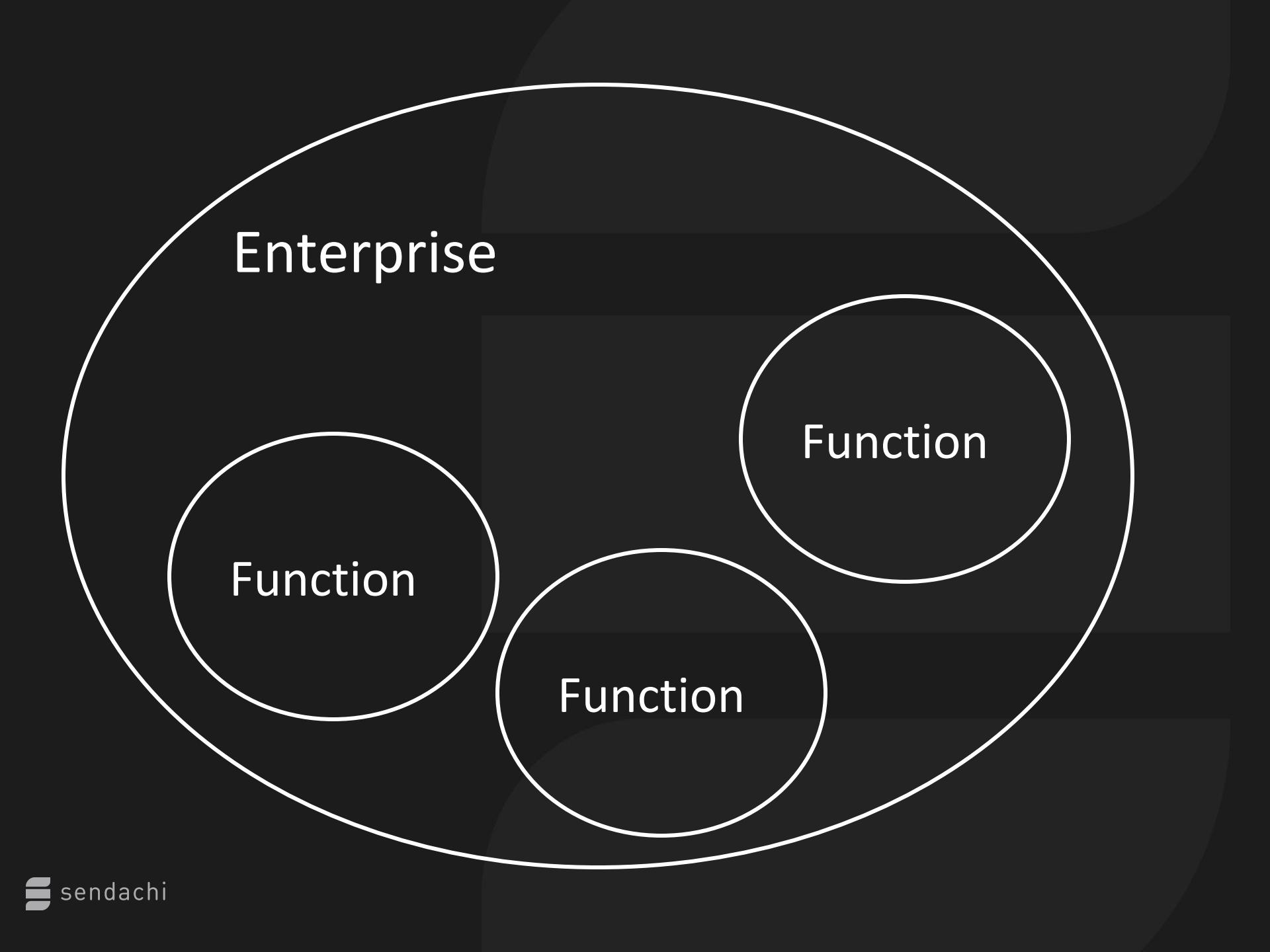
“It is not necessary to change. Survival is not mandatory.”

-- *W. Edwards Deming*

CHANGE

RISK

SLOW

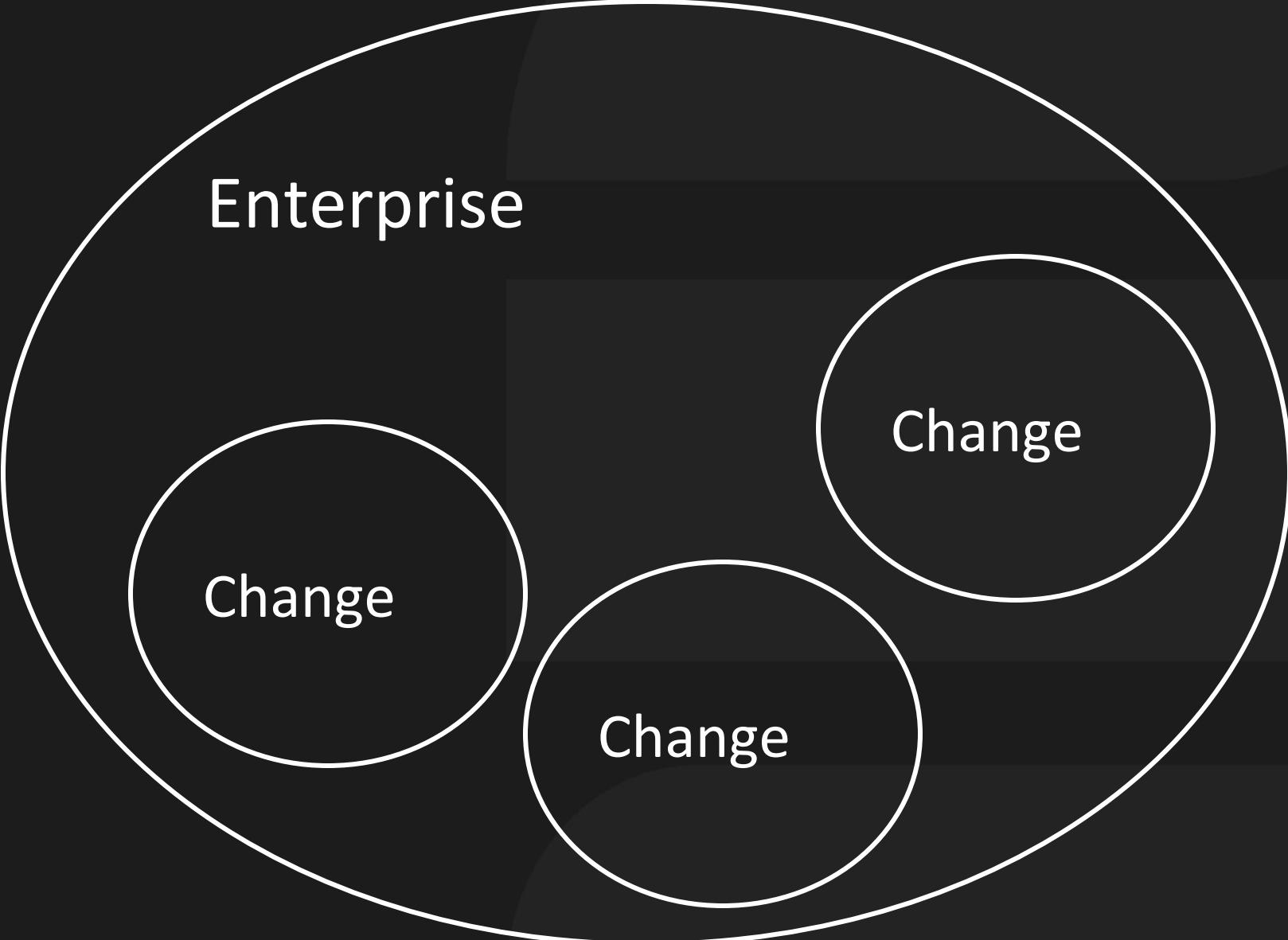


Enterprise

Function

Function

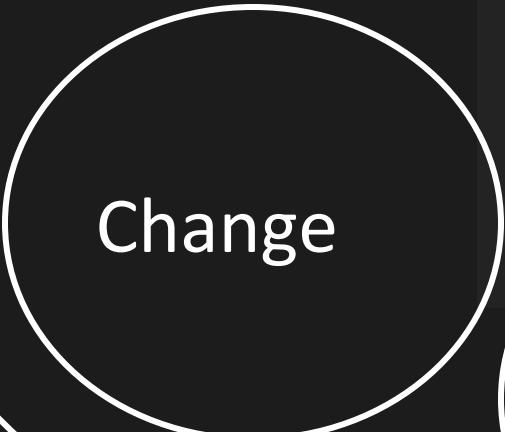
Function



Enterprise



Change



Change



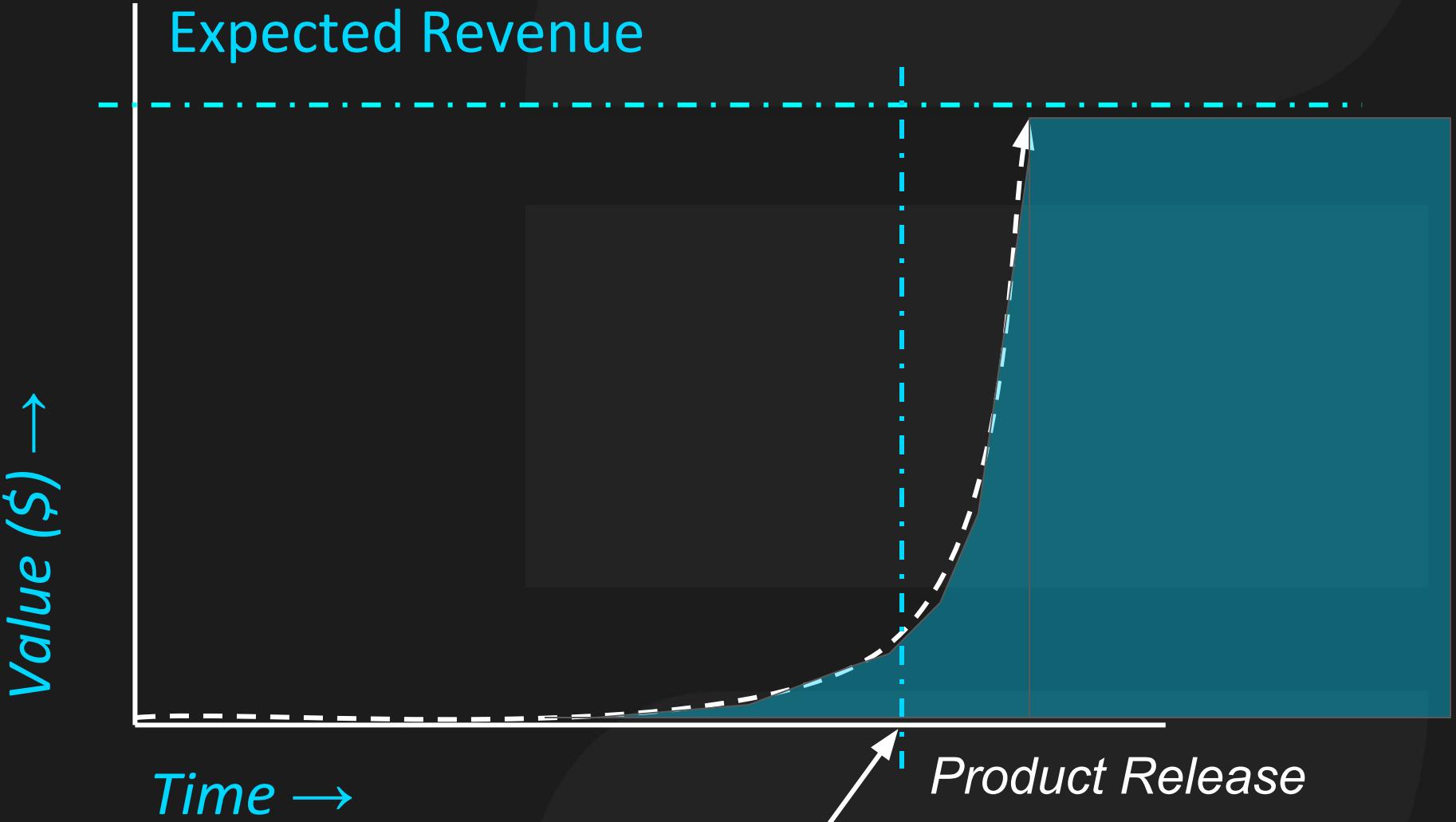
Change

UNEXPECTED



EMBRACE CHANGE

TIME VALUE OF MONEY



Expected Revenue

Value (\$)

Time →

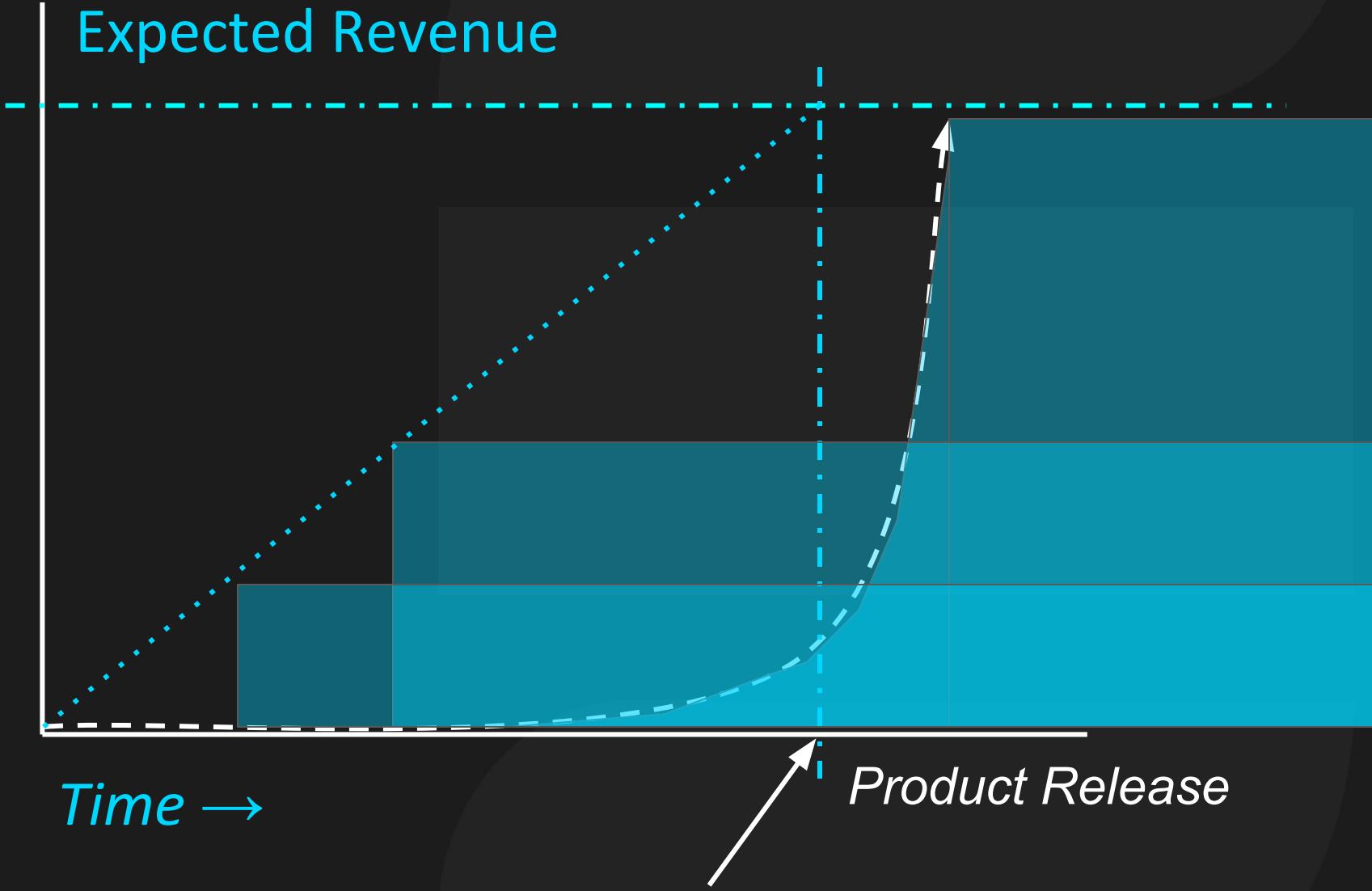
Product Release

Expected Revenue

Value (\$)

Time →

Product Release



Expected Revenue

Value (\$)

Time →

Product Release

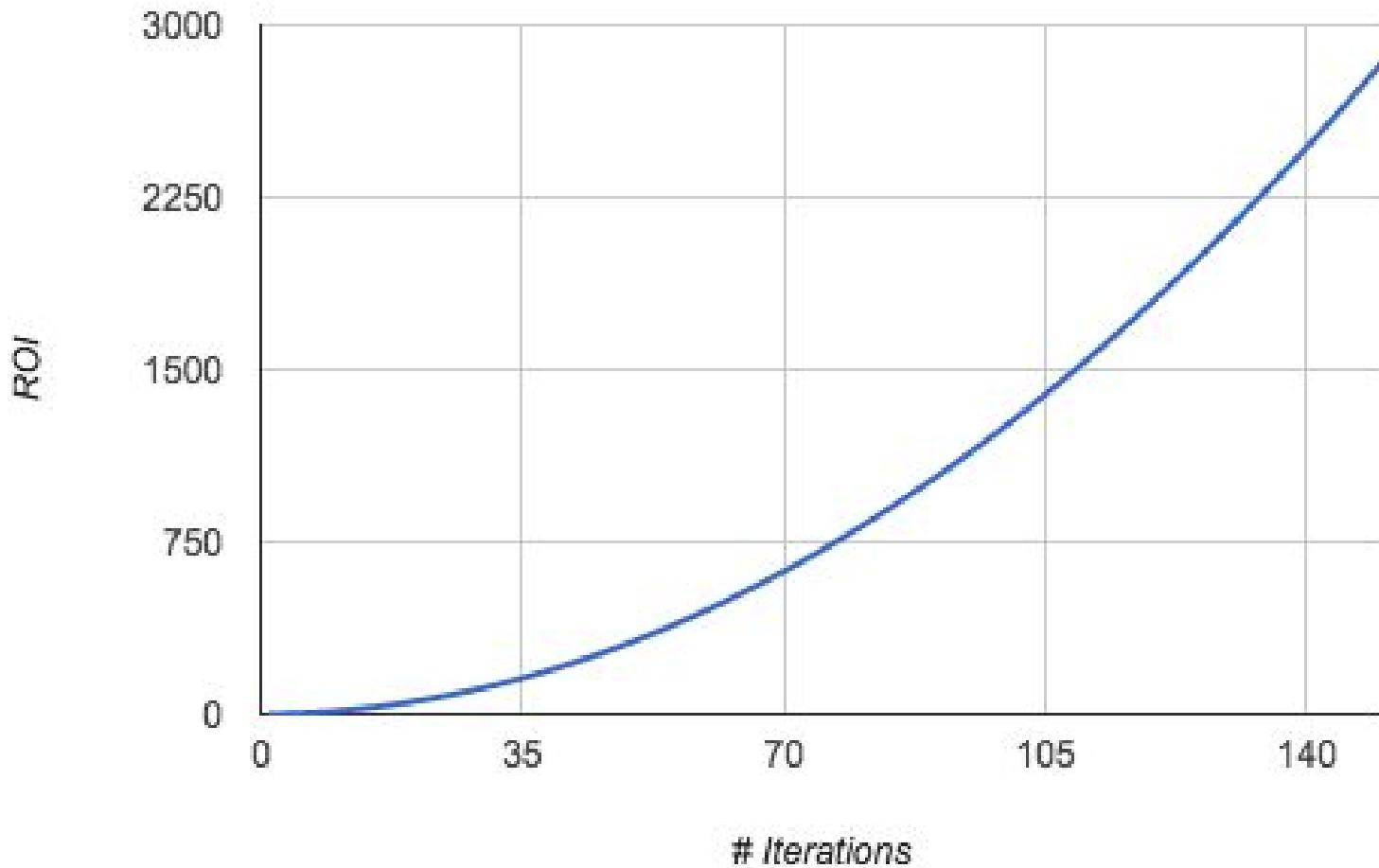
$$ROI_{\text{iter}} = \frac{R - C}{C} \cdot \frac{(n \cdot (n + 1))}{2}$$

n : count of iterations, frequency

R : revenue, net cash flow

C : cost to develop & deliver

ROI of Iterative Development



DEVOPS

- Humans are creative
- Humans are error-prone

- Processes are mundane
- Processes control error



DevOps (n):

- *Kaizen*
- Philosophy of
Continuous
Improvement

—

The value of a product is its
utility to the customer.

Improving the production flow
improves the quality of the
product.

Build integrity in:

- All *internal* processes must be oriented to their impact on the customer (end user).

“A system cannot understand
itself. The transformation
requires a view from outside.”

-- W. Edwards Deming



DevOps (v):

- Culture
- Automate
- Improve Process
- Measure & Learn
- Share Findings

CULTURE

- Small autonomous teams
- No silos, streamlined collaboration
- Open communication
- Experimentation is essential
- Reward learning, control risk
- Think like a startup

AUTOMATE

- Software testing, integration & rollout (deployment)
- Infrastructure as code
- Discover & integrate data sources
- Built-in Governance in data pipeline
- Analysis: Machine Learning

LEAN PROCESS

- Efficiency through self-service
- Easily add new reports & data sources through *configuration*
- Focus development work on *immediate value*
- Control queues and in-flow

MEASURE

- Data is everywhere
- Core requirement of projects
- Study the workflow
- Promote user-contributed data sets
- Rough data is good!!!

SHARING

- Frequent, systematic analysis
- Open communication of
 - Experiments
 - Findings & Discoveries
 - Failures & Successes
- Teams must share knowledge.

BUSINESS INTELLIGENCE



*Enable all contributors to gain
actionable insight at all levels*

A photograph of a sailboat's mast and rigging against a dark, choppy sea. The mast is white and shows signs of wear. The rigging consists of blue and white ropes. A large sail is partially visible on the right side of the frame.

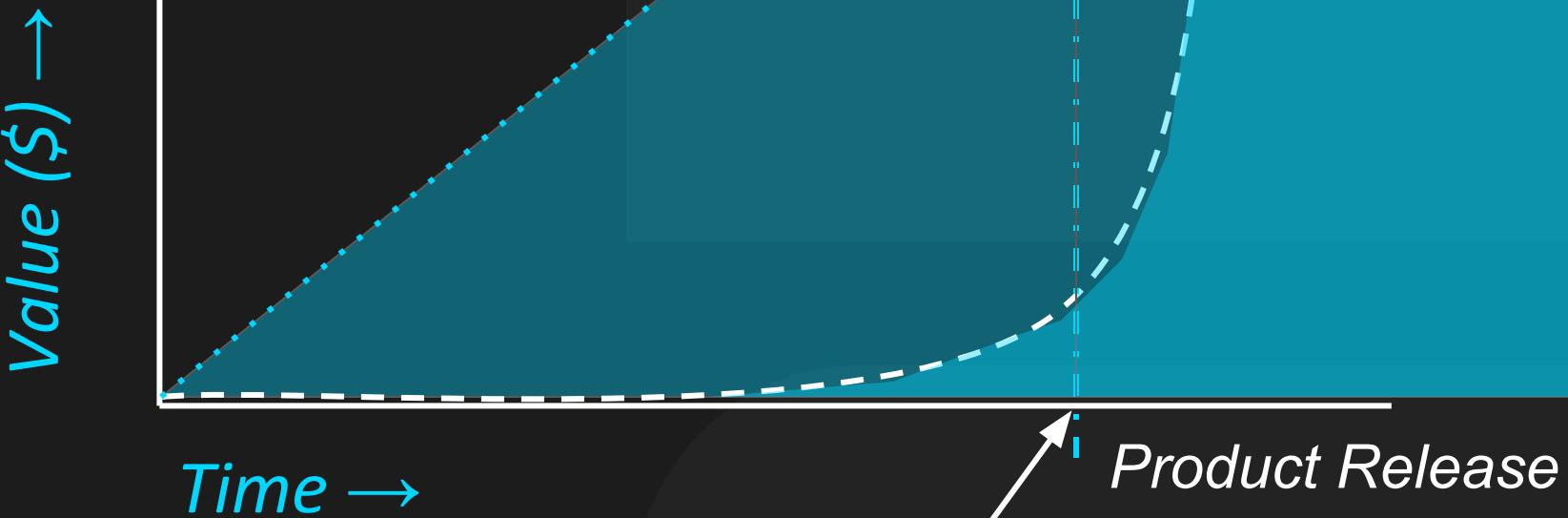
ENABLE
ENTERPRISE
AGILITY

BUSINESS
INTELLIGENCE
IS A PRODUCT

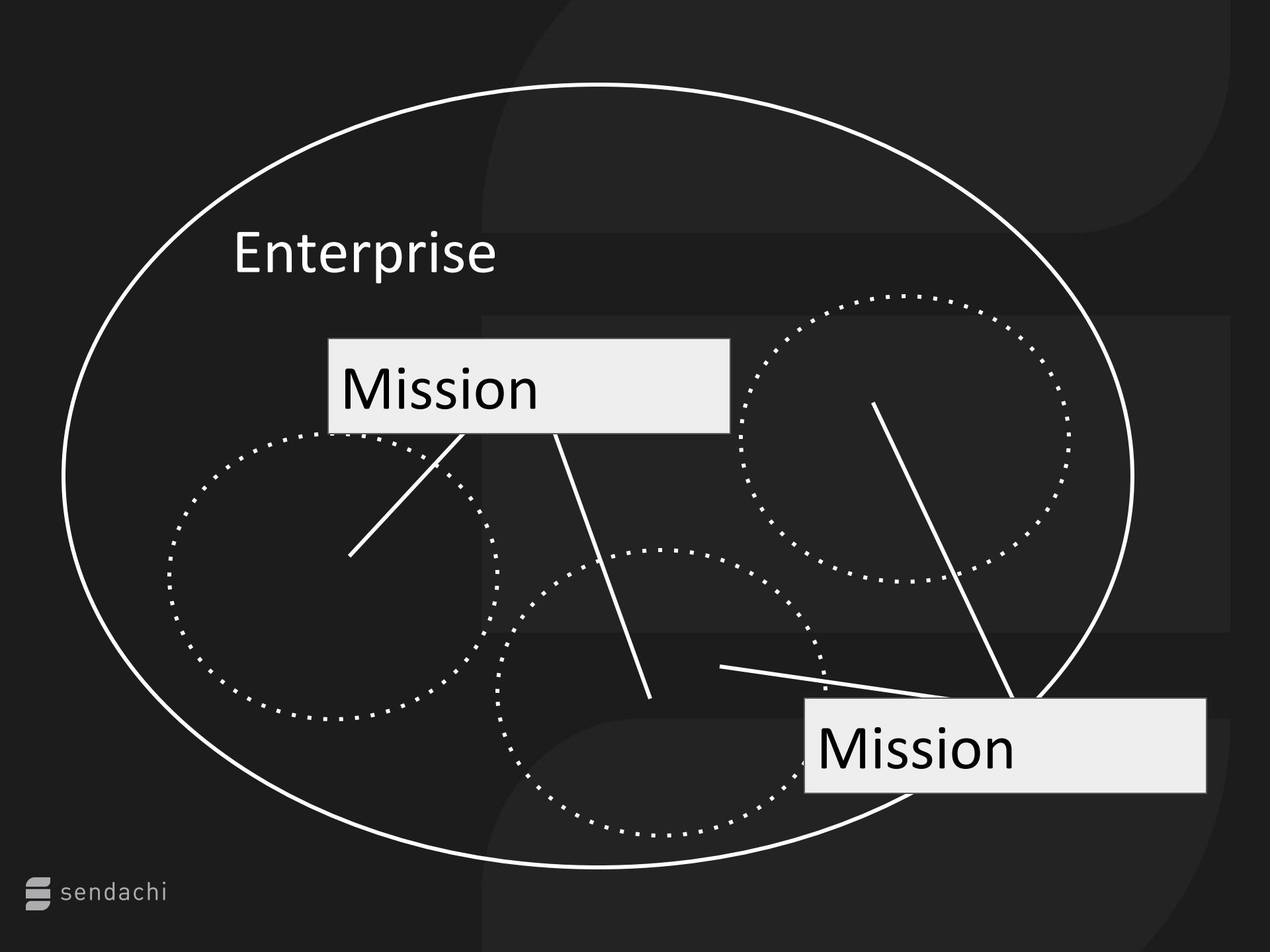
Business Intelligence is a Product

- Value proposition
- Market segments
- Feature blend
- “product-market fit”
- Support & documentation
- Development Lifecycle
- Adoption is essential

Expected Revenue



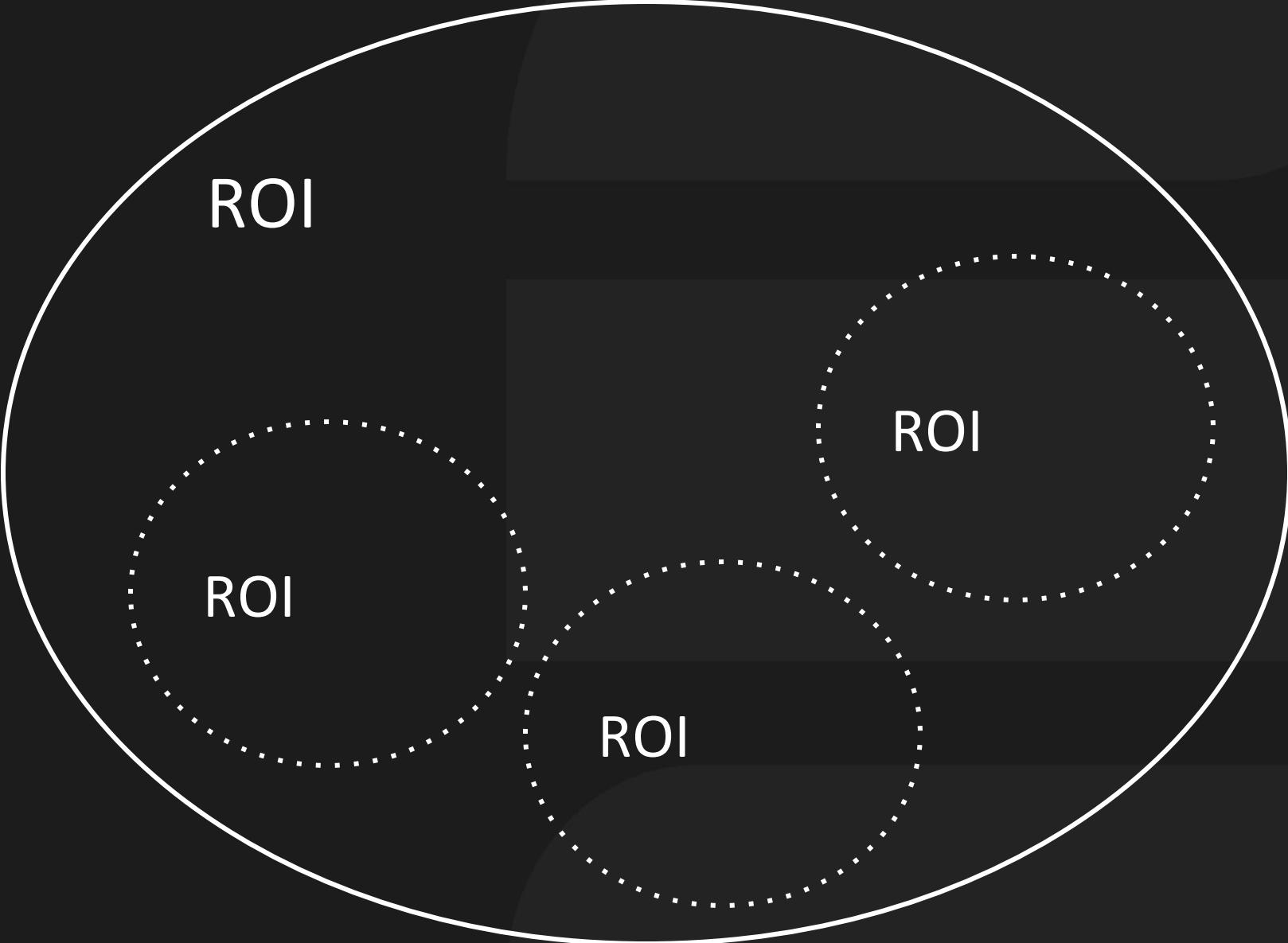
CHANGE IS CULTURE



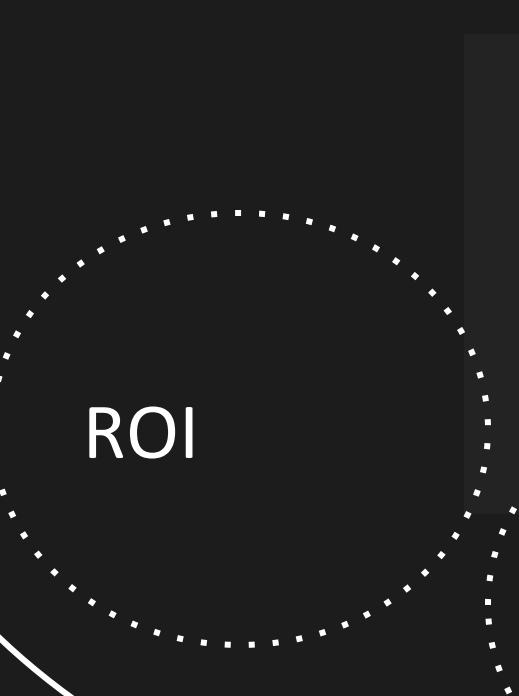
Enterprise

Mission

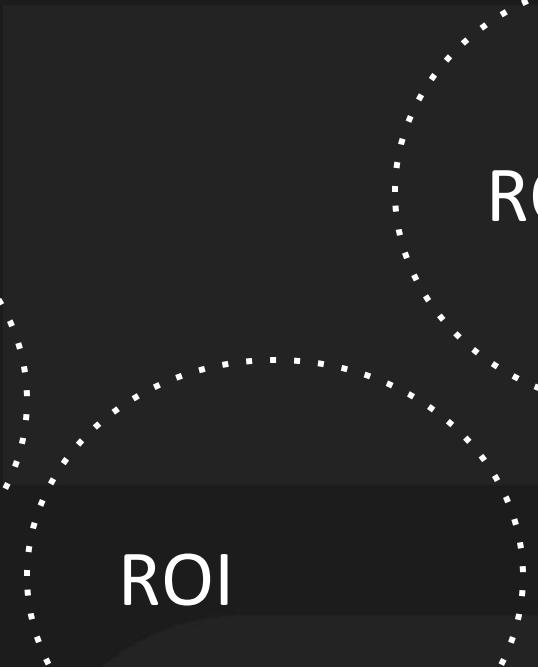
Mission



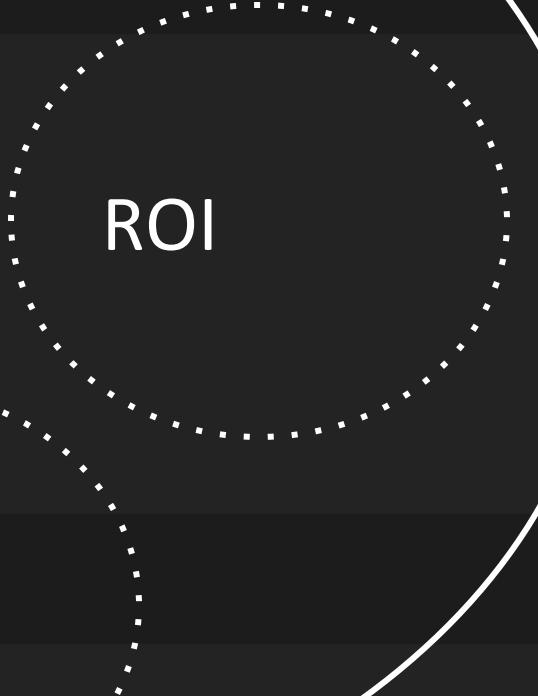
ROI



ROI

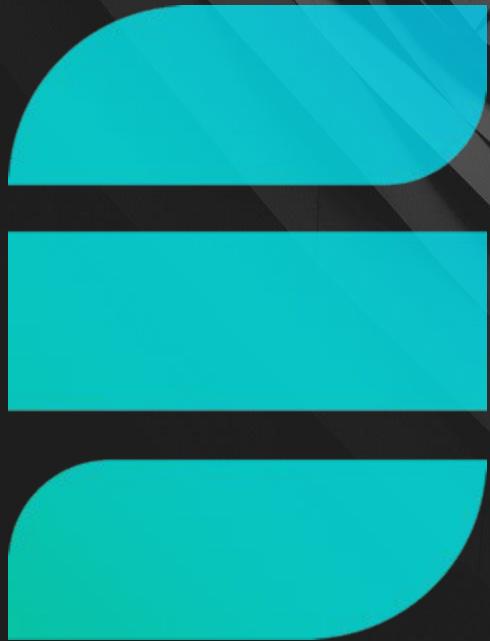


ROI



ROI

TIME TO MARKET



Business Intelligence Refactored with DevOps

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